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Deep depression brings heavy rain on 1 November 2009

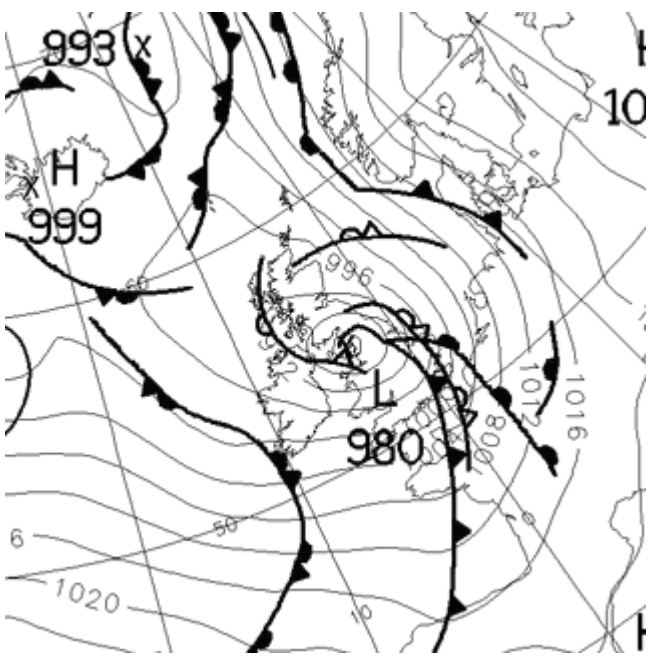
2 November 2009

Background

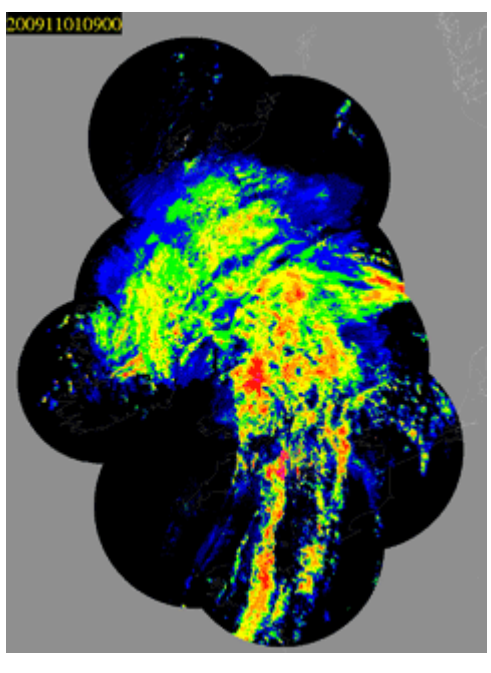
After the very quiet weather which had dominated for much of the first three weeks of October, the weather turned unsettled after the 20th with increasing amounts of rain. During the last week of the month, an area of low pressure was forecast to develop and explosively deepen close to the UK on Sunday 1 November, with computer forecasts indicating the possibility of widespread heavy rain and the risk of gales in places.

The area of low pressure developed as forecast to the south-west of Britain on Saturday night, crossing Wales and northern England during Sunday. It brought with it the expected heavy rain and strong winds, with gales in coastal areas.

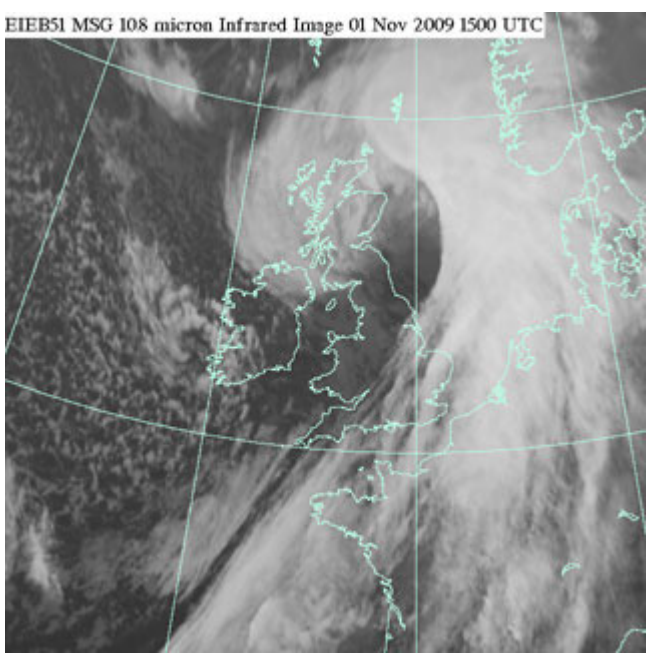
Analysis chart valid 1200 UTC Sunday 1 November 2009



Rainfall radar 0900 UTC Sunday 1 November 2009



Infrared satellite 1500 UTC Sunday 1 November 2009



Impacts

In the event, heavy rain spread north-east across the UK during the early hours of Sunday morning (1 November); firstly affecting Wales and Northern Ireland and then moving on to other parts of England and eventually into Scotland. Although not a prolonged spell of rain in Wales, it was heavy while it lasted and resulted in localised flooding. Fire and Rescue services took a few hundred calls at the height of the downpour and 13 people had to be rescued from homes and vehicles due to rising flood waters in south Wales.

- Thirteen rescued after flooding (BBC News)

The worst conditions affected the north and east of Scotland where the heavy rain came hard on the heels of wet weather during the previous week, resulting in saturated ground and high river levels. Flooding affected numerous areas in Aberdeenshire, Angus and Fife with the centre of Stonehaven flooded by the River Carron.

Arbroath in Angus was said to be virtually cut off by floodwater at one point and around 100 elderly people had to be evacuated from their care home in Huntly when it was threatened by floodwaters. Transport by road and rail was seriously affected with many services cancelled due to flooded lines and roads fared little better with a number of major routes closed or seriously impacted until flooding of carriageways began to ease.

- Scottish flooding causing chaos (BBC News)
- Summer? It seems like distant memory (the Scotsman)
- Roads become rivers as deluge hits (the Courier)

Weather data

Scotland — Total rainfall from 2100 on 31 October to 0900 on 2 November

Aberdeen (Dyce)	53.0 mm
Leuchars	50.2 mm
West Freugh	48.6 mm
Edinburgh	35.0 mm
Glasgow	29.2 mm

Wales — Total rainfall from 0900 on 31 October to 2200 Sunday 1 November

Capel Curig	53.0 mm
Mumbles Head	28.0 mm
Aberdaron	25.4 mm
Sennybridge	24.2 mm
Trawsgoed	23.6 mm

England – Total rainfall from 0900 on 31 October to 2200 Sunday 1 November

Boulmer	51.8 mm
Shap	51.6 mm
Keswick	46.0 mm
Rochdale	34.9 mm
Fylingdales	31.0 mm

Northern Ireland – Total rainfall from 0900 on 31 October to 2200 Sunday 1 November

Altnahinch	44.0 mm
Ballykelly	39.0 mm
Killowen	37.0 mm
Helens Bay	35.0 mm
Stormont	34.4 mm

How we did

This weather system was a particularly difficult one to forecast, originating in a data sparse-area of the sub-tropical Atlantic. Nonetheless, Met Office forecasters in the Operations Centre at Exeter and Aberdeen used their skill and experience to issue advisories for potential disruptive weather on Thursday 29 October, and updated on them on Friday the 30th as confidence grew in which areas were most likely to be affected. This preliminary guidance was particularly important as the severe weather was expected to occur at a weekend. It enabled emergency responders to put resources on standby to deal with the situation as it unfolded. Specialist regional advice was provided prior to, and through the weekend, by the Met Office team of Public Weather Service Advisors, demonstrating again the importance and benefit of the close working relationship between Met Office expert forecasters, regional advisors and the emergency response community.

Please note that all values and statements are provisional and subject to change.